

## Learning: Solar-Powered, Technology-Supported

*Solar panels power innovative uses of technology for learning in Rwanda.*



Figure 1 Dancille Nyirahabimana teaches a Kinyarwanda reading lesson using audio.

"[Students] enjoy learning in a special way," says Dancille Nyirahabimana, a first grade teacher at GS Murama in Rwanda's Bugesera district.

She's talking about the audio she plays in her classroom through a cell phone and portable speakers. The audio, featuring an audio teacher and audio children, guides her and her students through interactive lessons. They include stories and songs, as well as games and pair activities.

This year, all public primary schools in the country have received these audio lessons, as one part of a comprehensive package of instructional materials for grades one and two English, Kinyarwanda, and mathematics. The materials were developed by USAID with support from the Rwanda Education Board. In public schools nationwide, there are more than 1.1 million children in grades one and two.

While the audio has the potential to transform teaching and learning in the classroom, nearly half of the more than 2,400 public primary schools in Rwanda don't have access to electricity. To ensure that all schools benefit from the audio, on or off the electricity grid, USAID provided GS Murama and 1,138 other schools with solar panels.



**Figure 2 At GS Murama, portable speakers are charged by solar power.**

The audio lessons ensure that all teachers, regardless of location or training, are able to easily implement instructional practices in their classrooms proven to effectively develop children's literacy and numeracy skills. Guiding teachers through model lessons, the audio also frees teachers up to move around the classroom and interact with more children. Teachers prepare in advance, listening to the audio for the day's lesson as well as reviewing the teacher guide. Lessons may also use student books with simple, leveled stories, as well as stories that are read aloud on the audio while the teacher engages children, showing them the pictures in the book and helping them to understand.

Dancille's students at GS Murama were asked why they like the audio programs. "There are stories," answered one student. "It helps us to increase our knowledge," said another.

According to Dancille, her students also appreciate listening to Mahoro and Hirwa, the audio children featured in the lessons. "They motivate the students," she says. "They are the same age."

Since the audio has been introduced, children are also attentive and excited to learn. "[Students] are eager to follow the phone," says Charlotte Nyirambarushimana, a grade one English teacher at the school. "They are sharp, learners speak well."

Students aren't the only ones happy with the new method of learning. Teachers are equally appreciative.

"It makes their work very easy and helps them to know the teaching methodology," says Solange Uwamahoro, principal of GS Murama.

"Even teachers are learning," says Charlotte. "They listen to the audio before and improve pronunciation [in English]."

In this way, students and teachers across the country are engaged in solar-powered, technology-supported learning.